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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,373	07/14/2005	Tomoo Mizumura	Q88943	7793

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EXAMINER	
MESH, GENNADIY	

ART UNIT	PAPER NUMBER
1796	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/542,373	MIZUMURA ET AL.	
	Examiner	Art Unit	
	Gennadiy Mesh	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 July 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *See Continuation Sheet*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :07/14/2005,07/14/2006,07/16/2007,10/03/2007.

DETAILED ACTION

Election/Restrictions

1. This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

(I) Polyester yarn obtain by polycondensation process catalyzed by catalyst of mixture (1) – see claim 1

(II) Polyester yarn obtain by polycondensation process catalyzed by catalyst of reaction product (2) – see claim 1.

Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

The claims are deemed to correspond to the species listed above in the following manner:

Readable on (I) : Claims 1-2, 5 - 12, 16-17 and 19-20.

Readable on (II) : Claims 1- 4,13-15 and 18.

The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: Catalyst mixture(1) and reaction product (2) consist of phosphorus compounds with different chemical structures – see formulas (III) and (IV).

2. During a telephone conversation with Joseph Ruch on October 11,2007 a provisional election was made with traverse to prosecute the invention related to Specie of (I) Claims 1-2, 5 – 12, 16-17 and 19-20.

Affirmation of this election must be made by applicant in replying to this Office action. Claims 3-4,13-15 and 18 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-2, 5 – 12, 16-17 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita et al(US 4,965,919) in view of Yamamoto (US 6,593,447) and in further view of Kowallik et al.(4,254,018).

Regarding Claim 1 Fujita "919" discloses polyester commingled yarn, comprising at least two types of filaments with different boiling water shrinkage ratios value (see abstract and lines 35-52,column7).

Fujita does not disclose specific method for polymerization of the polyester nor specific catalyst claimed by Applicant in Claim 1.

However, Yamamoto teach, that polyester fiber(see lines 16-22,column 1) can be obtain from polyester produced by polycondensation process, wherein catalyst comprising reaction product of :

i) titanium compound - see formula (I) of abstract - this compound is substantially same as compound (IV) of Claim 1

ii) aromatic polyfunctional carboxylic acid – see formula (II) of abstract – this component same as component (II) of Claim 1

iii) phosphorus compound - see Formula (III) of abstract- this component same as component (V) of Claim 1.

Yamamoto further teach that this catalytic system allowed to obtain **polyester with good color tone and excellent melt stability** compare for example with polyester obtained by antimony comprising catalyst (see lines 46-61,column 1 and 50 – 57,column 2).

Therefore, it would have been obvious for ordinary skill in the art at the time of the invention to use polyester, obtain by process catalyzed by titanium compound as it taught by Yamamoto, for production of polyester commingled yarn disclosed by Fujita.

Note, that Yamamoto silent regarding use of alternative phosphorus compound (see Formula (III)) claimed by applicant in Claim 1.

However, use of this specific phosphorus compound (Formula (III) in Claim 1) for polyester polymerization and yarn production is well known in the art.

Kowallik teach(see abstract) that phosphonate compound of chemical Formula (III) can be used as heat stabilizing agent during polyester polymerization process and capable not only suppress discoloration, but also prevent **formation of coarse precipitates that can clog spinning dyes during fiber production.**

Therefore, it would have been obvious for ordinary skill in the art at the time of the invention to obtain polyester fiber structure by polymerization process disclosed by Yamada in view of Yamamoto, wherein heat stabilizing compound is the specific compound (compound of Formula III in claim 1) taught by Kowallik in order prevent **formation of coarse precipitates that can clog spinning dyes during fiber production.**

Regarding limitations of Claim 2 - see Yamamoto, lines 50 – 53,column 6 and lines 29-39,column 5.

Regarding limitations of Claims 5, 6, 16-17 and 19-20 – see Yamamoto, lines 60-68,column 8 and column 9, lines 1-50.

Regarding limitations of Claim 7 – see Fujita(abstract and lines 35-52,column7).

Regarding limitation of Claim 8 - Fujita discloses that yarn has substantial sheath-core fashion (see lines 31-33,column 5).

Regarding limitations of Claims 9 and 10 – see Fujita lines 24-35,column 6. Also note, that as substantially same polyester yarn – obtain from same composition and same processing conditions, yarn will have substantially same properties, including boiling water shrinkage ratio and crimp ratio..

Regarding limitations of Claim 11 – see Fujita Table 1.

Regarding limitations of Claim 12 – see Fujita lines 35-52,column 7.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1- 6 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 7,087,299 (Konishi et al). Although the conflicting claims are not identical, they are not patentably distinct

from each other, because they represent obvious variation of each other: Konishi discloses process for producing polyester fibers (see claims 1- 6) by same catalytic system including same Titanium compound and same Phosphorous compound (see claim 1).

5. Claims 1- 6 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8 and 20-21 of U.S. Patent No. 7,189,797 in view of Fujita et al(US 4,965,919) , Yamamoto (US 6,593,447) and Kowallik et al.(4,254,018).

Although the conflicting claims are not identical, they are not patentably distinct from each other, because they represent obvious variation of each other.

Claims 1-8 and 20-21 of U.S. Patent No. 7,189,797 drawn to process of producing polyester with identical catalyst as it claimed by the Applicant in Claims 1-6.

Claims 1-8 and 20-21 of U.S. Patent No. 7,189,797 are silent regarding use of the polyester for fibers structures.

However, as it was discussed above Fujita et al(US 4,965,919) in view of Yamamoto (US 6,593,447) and in further view of Kowallik et al.(4,254,0180) teach that this specific polyester can be used for production of fiber and fiber based structures.(see paragraph 3 above).

Therefore, it would have been obvious for ordinary skill in the art at the time of the invention to modify claims of U.S. Patent No. 7,189,797 and claimed use of

polyester obtained by specific catalyst for fiber and fiber based structures as it was taught by Yamada in view of Yamamoto.

6. Claims 1- 6 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 10/541,574: claims of both Applications significantly overlapping in scope as claimed subject matter drawn to polyester fibers, obtain by the same polymerization process with same catalytic system in both Applications.

This is a provisional obviousness-type double patenting rejection.

7. Claims 1- 6 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1- 15 of copending Application No. 10/535,419: claims of both Applications significantly overlapping in scope as claimed subject matter drawn to polyester fibers, obtain by the same polymerization process with same catalytic system in both Applications.

This is a provisional obviousness-type double patenting rejection.

8. Claims 1-6 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1- 16 of copending Application No. 10/540,880 : claims of both Applications significantly overlapping in scope as claimed subject matter drawn to polyester fibers, obtain by the same polymerization process with same catalytic system in both Applications.

This is a provisional obviousness-type double patenting rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gennadiy Mesh whose telephone number is (571) 272 2901. The examiner can normally be reached on 10 a.m - 6 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272 1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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GM

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